TABLE AA–1 TO SUBPART AA OF PART 98—KRAFT PULPING LIQUOR EMISSIONS FACTORS FOR BIOMASS-BASED CO_2, CH_4, AND N_2O

Wood furnish	Biomass-based emissions factors (kg/mmBtu HHV)		
	CO_2[a]	CH_4	N_2O
North American Softwood	94.4	0.030	0.005
North American Hardwood	93.7		
Bagasse	95.5		
Bamboo	93.7		
Straw	95.1		

[a] Includes emissions from both the recovery furnace and pulp mill lime kiln.

TABLE AA–2 TO SUBPART AA OF PART 98—KRAFT LIME KILN AND CALCINER EMISSIONS FACTORS FOR FOSSIL FUEL-BASED CH_4 AND N_2O

Fuel	Fossil fuel-based emissions factors (kg/mmBtu HHV)			
	Kraft lime kilns		Kraft calciners	
	CH_4	N_2O	CH_4	N_2O
Residual Oil				0.0003
Distillate Oil			0.0027	0.0004
Natural Gas	0.0027			0.0001
Biogas				0.0001
Petroleum coke			NA	[a] NA

[a] Emission factors for kraft calciners are not available.

[75 FR 79166, Dec. 17, 2010]

Subpart BB—Silicon Carbide Production

§ 98.280 Definition of the source category.

Silicon carbide production includes any process that produces silicon carbide for abrasive purposes.

§ 98.281 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains a silicon carbide production process and the facility meets the requirements of either § 98.2(a)(1) or (a)(2).

§ 98.282 GHGs to report.

You must report:

(a) CO_2 and CH_4 process emissions from all silicon carbide process units or furnaces combined.

(b) CO_2, CH_4, and N_2O emissions from each stationary combustion unit. You must report these emissions under subpart C of this part (General Stationary Fuel Combustion Sources) by following the requirements of subpart C.

§ 98.283 Calculating GHG emissions.

You must calculate and report the annual process CO_2 emissions from each silicon carbide process unit or production furnace using the procedures in either paragraph (a) or (b) of this section. You must determine CH_4 process emissions in accordance with the procedures specified in paragraph (d) of this section.

(a) Calculate and report under this subpart the process CO_2 emissions by operating and maintaining CEMS according to the Tier 4 Calculation Methodology specified in § 98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources).

(b) Calculate and report under this subpart the process CO_2 emissions using the procedures in paragraphs (b)(1) and (b)(2) of this section.

(1) Use Equation BB–1 of this section to calculate the facility-specific emissions factor for determining CO_2 emissions. The carbon content must be measured monthly and used to calculate a monthly CO_2 emisssions factor:

$$EF_{CO2,n} = 0.65 * CCF_n * \left(\frac{44}{12}\right) \qquad \text{(Eq. BB-1)}$$

Where:

$EF_{CO2,n}$ = CO_2 emissions factor in month n (metric tons CO_2/metric ton of petroleum coke consumed).

0.65 = Adjustment factor for the amount of carbon in silicon carbide product (assuming 35 percent of carbon input is in the carbide product).

CCF_n = Carbon content factor for petroleum coke consumed in month n from the supplier or as measured by the applicable method incorporated by reference in §98.7 according to §98.284(c) (percent by weight expressed as a decimal fraction).

44/12 = Ratio of molecular weights, CO_2 to carbon.

(2) Use Equation BB–2 of this section to calculate annual CO_2 process emissions from all silicone carbide production:

$$CO_2 = \sum_{n=1}^{12}\left[T_n * EF_{CO2,n}\right] * \frac{2000}{2205} \qquad \text{(Eq. BB-2)}$$

Where:

CO_2 = Annual CO_2 emissions from silicon carbide production facility (metric tons CO_2).

T_n = Petroleum coke consumption in month n (tons).

$EF_{CO2,n}$ = CO_2 emissions factor from month n (calculated in Equation BB–1 of this section).

2000/2205 = Conversion factor to convert tons to metric tons.

n = Number of month.

(c) If GHG emissions from a silicon carbide production furnace or process unit are vented through the same stack as any combustion unit or process equipment that reports CO_2 emissions using a CEMS that complies with the Tier 4 Calculation Methodology in subpart C of this part (General Stationary Fuel Combustion Sources), then the calculation methodology in paragraph (b) of this section shall not be used to calculate process emissions. The owner or operator shall report under this subpart the combined stack emissions according to the Tier 4 Calculation Methodology in §98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part.

(d) You must calculate annual process CH_4 emissions from all silicon carbide production combined using Equation BB–3 of this section:

$$CH_4 = \sum_{n=1}^{12}\left[T_n * 10.2\right] * \frac{2000}{2205} * 0.001 \qquad \text{(Eq. BB-3)}$$

Where:

CH_4 = Annual CH_4 emissions from silicon carbide production facility (metric tons CH_4).

T_n = Petroleum coke consumption in month n (tons).

10.2 = CH_4 emissions factor (kg CH_4/metric ton coke).

2000/2205 = Conversion factor to convert tons to metric tons.

0.001 = Conversion factor from kilograms to metric tons.

n = Number of month.

§98.284 Monitoring and QA/QC requirements.

(a) You must measure your consumption of petroleum coke using plant instruments used for accounting purposes including direct measurement weighing the petroleum coke fed into